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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/531,273

04/13/2005

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EXAMINER

DRODGE, JOSEPH W

ART UNIT

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1797

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,273	Applicant(s) GIRONDI, GIORGIO	
	Examiner Joseph W. Drodge	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>04/13/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over any of Kawabata patent 4,580,542, Matsui patent 4,321,136 or Davis patent 4,680,110 in view of McQueen et al patent 6,208,254.

Davis discloses a fuel filter comprising an outer casing provided with a fuel inlet conduit 20, outlet conduit 22, internally housed filter means 10/17, the casing comprising upper chamber

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containing filter media 28/52 , lower chamber (column 4, lines 24-28) , the lower chamber collecting the water , and means for measuring the level of water collected in the lower chamber , and also means for measuring temperature (both in column 4, lines 42-55) . The temperature and level sensing means are electrically coupled to supporting plate or card 138 or 158.

Kawabata discloses a fuel filter comprising an outer casing 11 provided with a fuel inlet conduit 18, outlet conduit 19, internally housed filter means 15 , the casing comprising upper chamber 15, lower chamber 32, the lower chamber collecting the water , and means for measuring the level of water collected in the lower chamber (column 3, lines 1-12) , and also means for measuring temperature (column 3, lines 22-26) . The electrical contacts of the sensor are coupled to a supporting member or plate 26 (column 2, lines 58-64).

Matsui discloses a fuel filter comprising an outer casing 3 provided with a fuel inlet conduit 6, outlet conduit 7, internally housed filter means 4 , the casing comprising upper chamber (space above partition 4a), lower chamber 5 , the lower chamber collecting the water , and means for measuring the level of water collected in the lower chamber (column 3, lines 9-41) , and also means for measuring temperature (column 3, lines 55-67). The level measuring and temperature measuring means are electrically connected to an instrument panel or plate of a vehicle housing the fuel filter (column 2, line 58).

The claims differ in requiring the means for measuring water level to comprise a temperature sensor operable for generating an electrical signal , and said signal being fed to the electronic card (circuit board, plate holding the electrical components or circuitry or electronic chip) and at least two conductors utilized in signal transmission.

McQueen et al '254 teach to utilize temperature sensing means for measuring levels of immiscible fluids such as oil and water (column 8, lines 4-7 and column 10, lines 41-44) and in environments such as tanks (column 10, line 25); the temperature sensing means employing a plurality of electrical leads or conductors 21,22/column 9, lines 35-40 and/or column 12, lines 57-68, and associated electrical control circuit or circuit board or supporting substrate or computer chip, see column 11, lines 59-64 . It would have been obvious to one of ordinary skill in the art to have utilized the temperature sensing means of McQueen et al in the apparatus of Kawabata patent 4,580,542, Matsui patent 4,321,136 or Davis patent 4,680,110, since such form of level sensing is highly sensitive and responsive to even relatively small changes in fluid level, and changes in fluid phase and associated temperatures, and sensitive to changes in the oil or fuel/water interface, to timely effect responsive control.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of Kawabata patent 4,580,542 in view of McQueen et al patent 6,208,254. Regarding claims 2 and 3, Kawabata also disclose the further recited float, float guide stem, and magnetic field sensor commonly coupled with the temperature sensor (see column 3, lines 53-64 and column 4, lines 3-16).

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of Kawabata patent 4,580,542, Matsui patent 4,321,136 or Davis patent 4,680,110 in view of McQueen et al patent 6,208,254 as applied to claim 1 above, and further in view of Kurz patent 5,394,134. Claim 4 differs in requiring that the temperature sensor is of the NTC type (presumably "negative temperature coefficient-containing element). Kurz teaches such sensor

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element in a temperature sensor for detecting fluid level such as coolant level in a vehicle (column 2, lines 32-44). It would have also been obvious to have employed the NTC type elements of Kurz, so as to detect rising temperatures above a set threshold to trigger an alarm or control signal at the appropriate time.

Claim 5 differs in requiring the temperature sensor to be embedded in a layer of conductive resin. Such is taught by Kurz at column 1, lines 40-55 and column 3, lines 24-39. It would have been also suggested to employ such conductive resin so as to securely hold the sensing assembly together, while permitting a good heat transfer and fast response time.

McQueen patent 5,201,223 is made of record as being closely related in subject matter to McQueen et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at telephone number 571-272-1140. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Roy Sample, can be reached at 571-272-1376. The fax phone number for the examining group where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more

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information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

2/9/2008

/Joseph W. Drodge/

Primary Examiner, Art Unit 1797